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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/656,179

09/08/2003

Gerd Jonas

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05/18/2006

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
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EXAMINER

BEFUMO, JENNA LEIGH

ART UNIT

PAPER NUMBER

1771

DATE MAILED: 05/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/656,179

Applicant(s)

JONAS ET AL.

Examiner

Jenna-Leigh Befumo

Art Unit

1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 24, 2005 has been entered.

Response to Amendment

2. The Amendment submitted on August 24, 2005, has been entered. Claims 1 – 21 have been cancelled. Claims 22 and 28 – 35 have been amended. Therefore, the pending claims are 22 – 35.

3. The affidavits filed on August 24, 2005 and February 23, 2006 under 37 CFR 1.131 are sufficient to overcome the Brehm et al. (5,672,633) and Dawson (5,709,089) references. The applicant has demonstrated that the super absorbent materials disclosed by Brehm et al. and Dawson et al. would not inherently have the claimed Q_{sap} property. Thus, the rejections based on Brehm et al. and Dawson are withdrawn.

4. The amendments to the claims are sufficient to overcome the objections to claims 32, 34, and 35, set forth in the previous Office Action.

5. The 35 USC 102/103 rejection based on Midkiff et al. (EP 0 353 334) is withdrawn since Midkiff et al. did not explicitly teach using a super absorbent material with a partially neutralized ethylenically unsaturated monomer containing an acid group and a crosslinker. However, a new rejection based on Midkiff et al. is set forth below.

Priority

6. While it is noted that the applicant cited the request for priority in the ADS filed in the application, the specification must contain a reference to the prior application in the first sentence of the specification.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 22 – 35 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. A superabsorbent comprising a partially neutralized ethylenically unsaturated monomer containing an acid group and a specific combination of crosslinker mixtures, degree of neutralization, and batch concentration, is critical or essential to the practice of the invention, but not included in the claims is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). Currently, the superabsorbent material claimed comprises a partially neutralized ethylenically unsaturated monomer containing an acid group and a crosslinker. However, the disclosure teaches that the present invention is a result of a specific combination of crosslinker mixtures, degree of neutralization, and batch concentration which results in the formation of a superabsorbent with the desired improved properties found in the applicant's invention (Specification, page 14, 2nd paragraph). Further, the disclosure teaches that the crosslinker used in the invention is not just a single crosslinker, but in fact a specific combination of crosslinker materials that includes a crosslinker from Group A (as defined in the applicant's disclosure) that is always mixed with at least one of a crosslinker from Groups B and

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C (as defined by the applicant's disclosure) (specification, page 15, 4th paragraph). Thus, the crosslinker material required to produce the applicant's invention is not just a single crosslinker, but in fact a mixture of crosslinkers with one crosslinker being from Group A and at least one of the crosslinker materials in Group B or C. By the disclosure's own admission, the specific crosslinker combination is required to produce the improved superabsorbent material, and the invention is a result of a specific combination of crosslinker mixtures, degree of neutralization, and batch concentration. Therefore, the claims must also recite the critical structural limitations needed to practice the invention.

9. Claims 21 – 35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

10. Claims 22 – 35 are indefinite because they fail to set forth the composition or structure of the absorbent polymer and only claim properties of the $Q_{SAP3.0}$ and retention. Claims that merely set forth physical characteristics desired in an article, and not setting forth specific compositions which would meet such characteristics are invalid as vague, indefinite, and functional since they cover any conceivable combination of ingredients either presently existing or which might be discovered in the future. *Ex parte Slob* (PO BdApp) 157 USPQ 172. Also, note *Austenall Laboratories, Inc. v. Nobilium Processing Company*, 115 USPQ 44. Additionally, "Reciting the physical and chemical characteristics of the claimed product will not suffice where it is not certain that a sufficient number of characteristics have been recited that the claim reads only on the particular compound which the applicant has invented." *Ex parte Siddiqui*, 156 USPQ 426; *Ex parte Davission et al.*, 133 USPQ 400; and *Ex parte Fox*, 128 USPQ 157.

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In other words, the applicant is limiting the claims by reciting properties of the super absorbent material and not by citing sufficient structural or chemical limitations to describe the claimed invention. Currently, the claim recites the superabsorbent material comprises a partially neutralized ethylenically unsaturated monomer containing an acid group and a crosslinker. And as shown in the applicant's affidavit all materials with these structural features do not necessarily have the claimed properties. Thus, it would not be obvious to one having ordinary skill in the art which absorbent materials fall within the scope of the claims and which do not. Further, by not claiming the invention with sufficient structural limitations, the claims could read on materials which might be invented and are not the applicant's present invention. Therefore, the claims are indefinite because they do not recite sufficient structure to necessarily produce the claimed properties, and as a result, the claimed product. Further, the property recitation is not sufficient to limit the superabsorbent because it is not known or obvious to one of ordinary skill in the art which materials would or would not have the claimed product, making the claim vague and indefinite.

11. The phrase "said top covering layer and said bottom covering layer ... comprise a plastic film, a cellulose film, a fabric or a fleece; and at least one part of said top covering layer and bottom covering layer is permeable to water or an aqueous liquid as a result of perforation" in claim 28 is indefinite. It is unclear if the fabric or fleece material need to be perforated to be permeable. Both those materials can be permeable due to the fabric structure used to produce the material and would not need perforations added to the fabric to make it permeable. While a film layer is not permeable unless holes are added via perforation. So is the claim requiring the

layers, if made from a fabric, are still perforated? Or can materials which are already permeable be used as one of the layers without additional perforations?

12. Claim 29 is still rejected for the reasons of record. Particularly, the claim recites the absorbent core comprises “a fleece, a fiber, or a fabric”. Is the absorbent core material made from a single fiber? Or should the absorbent core be made from a group of fibers?

13. Claim 30 is still rejected for the reasons of record. Claim 30 recites that the core has layers of absorbent polymer arranged within said fiber or fabric. With regards to the core being a fiber, is the absorbent polymer a part of the fiber, so that the fiber is made with layers. Or, is the core made from a group of fibers that form a single layer, or multiple layers, combined layers of the absorbent polymer? Further, is the layered absorbent material formed within the single fabric layer? Or, is the core made up of multiple fabric layers with the absorbent material located between the fabric layers?

Claim Rejections - 35 USC § 103

14. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

15. Claims 21 – 30, 32, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dahmen et al. (WO 95/02002 with US 5,712,316 as the English translation) in view of Kellenberger (EP 0443 627 A2).

Dahmen et al. discloses a superabsorbent polymer composition comprising a partially neutralized acid-group containing monomer and a crosslinking agent (abstract). The polymers are suitable for use as an absorbent component in diapers, wound dressing, incontinence articles, and packaging materials (abstract). Examples include materials which have retention values of

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greater than 25 and absorption under load of greater than 15 (Table 2). The acid containing monomer can be chosen from acrylic acid, methacrylic acid, 2-acrylamido-2-methylpropane sulfonic acid (column 4, lines 22 – 28). While Dahmen et al. discloses that the absorbent material has improved absorption velocity and high retention capacity, and high absorption under an increased load, Dahmen et al. fails to explicitly teach the limitations of Q_{sap} and migration value and soluble ratio. However, it is reasonable to presume that said limitations are inherent to the absorbent material of Dahmen et al. Support for said presumption is found in the use of similar materials (i.e. a partially neutralized acid-group containing monomer and a crosslinking agent) and in the similar production steps (i.e. neutralizing the polymer material to the extent of at least 50 mole percent) used to produce the superabsorbent material. The burden is upon the Applicant to prove otherwise. *In re Fitzgerald*, 205 USPQ 594.

In the alternative, it would have been obvious to one having ordinary skill in the art to choose superabsorbent material with improved retention, absorption under load, and migration properties such that the absorbent product will absorb high amounts of fluids without allowing the fluids to release or migrate away from the absorbent core.

Additionally, while Dahmen et al. discloses that the absorbent material can be used in various absorbent products such as diapers, personal hygiene pads, or packaging pads, Dahmen et al. fails to provide the structure of the absorbent pads. Kellenberger is drawn to absorbent products. Kellenberger discloses the superabsorbent material is contained by containment means such as a fibrous matrix (abstract). Alternatively, the absorbent material can be contained by containment layers which are joined together to form a compartment in which the superabsorbent material is stored (page 8, lines 6 – 7). At least one of the layers is liquid permeable and it can

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be made from woven or non-woven fabrics, perforated films, and fibrous webs (page 8, lines 8 – 10). Further, Kellenberger discloses that the containment structure is used in an absorbent product which comprises a body-side liner and an outer cover (page 10, lines 45 – 50). The body-side liner can be made from known materials such as spunbonded polypropylene, which would be liquid permeable (page 10, lines 53 – 55). And the outer cover is a water impervious film layer (page 10, lines 55 – 57). Thus, it would have been obvious to use the absorbent structure taught by Kellenberger, with the superabsorbent material disclosed by Dahmen et al. since Dahmen et al. discloses that the superabsorbent material can be used in known absorbent products. Therefore, claims 21 – 30, 32, and 33.

16. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dahmen et al. and Kellenberger, as applied to claim 29, above, and in further view of Poccia et al. (5,100,397).

The features of Dahmen et al. and Kellenberger et al. have been set forth above. While Dahmen et al. discloses that the superabsorbent material can be used as an absorbent material in absorbent structures, Dahmen et al. fails to teach that the fibers are hollow. Poccia et al. is drawn to an absorbent mixture comprising web structure having fibers mixed with absorbent particles (column 2, lines 25 – 39). Poccia et al. teaches that the fibers can be made from various material, but polyester fibers having a hollow core are preferred (column 4, lines 37 – 43). Therefore, it would have been obvious to one of ordinary skill in the art to use hollow fibers as the fibers in the absorbent core taught by Dahmen et al. since Poccia et al. teaches the hollow fibers are the preferred type of fibers in the core layer and the hollow fibers will produce a lower weight fabric for the same size fibers as well as a less expensive fabric since less polymeric material is needed to produce hollow fibers. Thus claim 31 is rejected.

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17. Claims 22 – 29 and 32 – 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dahmen et al. in view of Midkiff et al.

The features of Dahmen et al. have been set forth above. Dahmen et al. discloses that the superabsorbent material can be used in absorbent products such as packaging material.

However, Dahmen et al. fails to teach using the absorbent material in food packaging. Midkiff et al. discloses an absorbent structure have a fluid permeable top sheet, a fluid impermeable bottom sheet and an absorbent core containing superabsorbent material (abstract). The absorbent structure is used to absorb liquids from food products (column 1, lines 1 – 5). Further, Midkiff et al. discloses that the absorbent materials are packaged with food products to absorb excess liquid (column 1, lines 30 – 35). Thus, it would have been obvious to one having ordinary skill in the art to use the absorbent packaging structure taught by Midkiff et al. with the superabsorbent material disclosed by Dahmen et al. since Dahmen et al. discloses the material can be used in absorbent packaging and it has improved absorbency under load properties. Thus, claims 22 – 29 and 32 – 34 are rejected.

18. Claims 22 – 29, 32, 33 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dahmen et al. in view of Dawson et al.

The features of Dahmen et al. have been set forth above. Dahmen et al. discloses that the superabsorbent material can be used in absorbent products such as packaging material.

However, Dahmen et al. fails to teach using the absorbent material in food packaging. Dawson et al. is drawn to an absorbent product. Dawson et al. discloses a package containing a superabsorbent polymer placed within a liquid permeable pouch, i.e., the pouch forms a top and bottom covering layer (abstract). The package can be used as a cooling package by adding water

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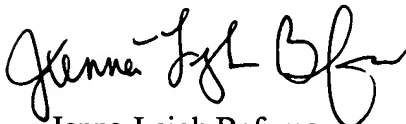
to the pouch and then freezing the pouch (column 1, lines 38 – 49). Thus, it would have been obvious to one having ordinary skill in the art to use the absorbent packaging structure taught by Dawson et al. with the superabsorbent material disclosed by Dahmen et al. since Dahmen et al. discloses the material can be used in absorbent packaging and it has improved absorbency under load properties. Thus, claims 22 – 29, 32, 33 and 35 are rejected.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jenna-Leigh Befumo whose telephone number is (571) 272-1472. The examiner can normally be reached on Monday - Friday (8:00 - 5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jenna-Leigh Befumo
May 14, 2006